

SCIENCE & EDUCATION **Impact**

Benefits from USDA/Land-Grant Partnership

Extension Provides Flexible, Rapid Response Nationwide network tackles local and emerging needs.

The Smith-Lever Act of 1914 set into motion an unbeatable vehicle for developing and delivering pertinent, timely information to people who need it. By establishing the Cooperative Extension System as an outreach of the land-grant system, Congress has provided citizens across the country with a wealth of cutting-edge, research-based information from university and field laboratories. Extension's legacy continues. Smith-Lever base funding provides an essential infrastructure that allows the extension network to address America's emerging and local needs – in its core areas of agriculture, natural resources, families, youth and community development. Without this basic infrastructure, diseases, droughts and other disasters would gain a greater advantage in the race to stop or prevent them.

Payoff

- **The scoop on mad cow.** When the first U.S. case of bovine spongiform encephalopathy (BSE), commonly called mad cow disease, was discovered in Washington State, the Cooperative Extension System was ready with answers about the safety of the nation's beef supply. The announcement cut U.S. beef exports – valued at \$3.5 billion annually – by 90 percent and retail prices dropped 9 percent the following month. Land-grants across the country quickly responded with research-based information on the disease and its risk to calm consumer fears about the \$70 billion industry. **Iowa State** provided a national satellite program that included call-in questions from consumers and farmers. **South Dakota State** produced a national call-in television show so viewers could talk directly with doctors. **Maine** and other extension systems – from **Nebraska** to **Washington State** – worked with media and created Web sites with links to research-based information about the disease. End result: Consumers did not panic and U.S. beef prices rebounded.
- **Better nutrition for low-income families.** Poor nutrition affects the health and productivity of some low-income families. With ongoing efforts in every state, the Expanded Food and Nutrition Education Program plays a vital role in improving the diets of low-income families to improve health and reduce health-care costs. Nationally, EFNEP reaches nearly half a million participants. A nationwide survey of

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86,000 of those participants showed high impact: 87 percent improved nutritional practices, such as making healthy food choices, cooking without salt, reading nutrition labels, or having children eat breakfast. Studies at **Virginia Tech** and **Iowa State** show that for every \$1 invested in EFNEP, \$10 in health-care benefits can be expected.

- **Emerging diseases.** The Cooperative Extension System provides an essential infrastructure to allow for rapid response to emerging diseases that threaten the nation's food supply. Soybean rust – known to reduce yields by 80 percent in Asia – was discovered in the United States in late 2004. Economic losses could range from \$640 million to \$1.3 billion in the first year of infestation, with losses expected to average between \$240 million and \$2.4 billion per year, depending on severity of annual outbreaks. Extension was ready. Land-grant universities in soybean-producing states had already developed extensive action plans, worked with the federal EPA to ensure fungicides would be available, and developed educational materials. Timely detection by a **Louisiana State** plant pathologist in late fall 2004 gave the system time to prepare before the next growing season. A fast-track system set up by **Iowa State** Extension trained 500 agricultural professionals as first detectors of soybean rust and 40 field specialists as triage personnel. **Arkansas, Mississippi, Cornell, Ohio State, Tennessee,** and other land-grants also quickly delivered information on the disease, so professionals across the agricultural industry could identify and take steps to control the disease.

- **Saving our nation's ash trees.** Emerald ash borer has chewed its way through more than 12 million ash trees and counting in Michigan, Ohio, Indiana, and Maryland. Unless the borers are stopped and eradicated, every native ash in North America is at risk. In Ohio, \$1 billion worth of ash lumber – valued for the state's tool handle manufacturing business – is at risk, along with a \$2 million ash nursery stock value, which has virtually lost its market. **Ohio State** Extension works through its extensive Master Gardener network to help homeowners spot the insect's damage and report infestations to prevent further spread of the pest. **Purdue** Extension collaborated with the Indiana Department of Natural Resources to educate foresters

and property owners on the pest. The aim of the land-grant efforts and collaborations is to contain and eradicate the pest, preventing spread into other states.

- **Disaster management.** Extension's nationwide network is ideally positioned to respond when disaster strikes. The national Extension Disaster Education Network (EDEN), a collaboration of Cooperative Extension systems across the nation, provides resources and training to state and local extension staff to better prepare them to respond. EDEN now includes 49 land-grant universities in 46 states, Guam, and Puerto Rico. **Michigan State** has trained hundreds of first responders to natural disasters and acts of terrorism. **Colorado State** Extension's drought response team targeted efforts to farmers, ranchers, horticulturalists, homeowners, and policymakers and offered strategies to survive the drought. In Indiana, **Purdue** helped the state land \$4.7 million in grants and \$15.2 million in loans for relief from widespread floods. **Minnesota** Extension provided critical "how-to" information on flood cleanup. When fire destroyed 138,000 acres of tribal rangeland, **Wyoming** Extension worked with producers holding grazing permits, the Bureau of Indian affairs, and others to implement long-term strategies to prevent the spread of fire. Creation of the plan resulted in eligibility for federal assistance to rehabilitate the burned area, including help with the \$2.5 million to \$6 million to replace 1,200 miles of fence.



**Cooperative State Research, Education,
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